



503948

Ecology and environment, inc.

International Specialists in the Environment

Job Number KJ5103

Michigan H

South Green Ave.

Detroit, Wayne County, MI

S05-9809-005

8P05CIR5XX

E & E Job Number K5103

Telephone Code Number 60815

Site Name Michigan H

South Green Avenue

City/State Detroit, MI

TDD 505-9809-005

PAN 8P0501RSXX

SSID _____

Start/Finish Date December 7, 1998 , _____

Book 1 of _____

E & E Emergency Response Center: (716) 684-8940

E & E Corporate Center: (716) 684-8060

MEDTOX Hotline: (501) 370-8263

E & E Safety Director (Home): (716) 655-1260

2
12/7/98

Michigan H

505 - 9809-005

0800 START Harvey on-site, - IT (Fluor Daniel GT) on site —
 wx: cool ~40°F, partly sunny, slight wind to the ~~SW~~^{SW} —
 IT and START prep —

0815 HM Environmental on-site —

0820 Dan Strybel of Fluor Daniel on-site —
 site safety meeting, site walk, will be monitoring the site for dust,
 BTEX, cyanide, show location of hospital and police station, decon
 from area to area by laying some visqueen below bucket and washing
 with citrcell —

0900 Fluor Daniel puts up air sampling pumps at each corner of the
 triangular site for BTEX, dust —

0920 HM Env. moves a 320B excavator —

0930 HM starts a test pit in the south spot where blue soil was encountered
 a seam of blue stained soil encountered at ~ 1.5' bgs —

1005 sandy silt was encountered, no staining observed, Fluor sampled the
 clay at ~ 3.5' bgs, they stepped out to the ^{west}, no blue staining
 observed along edge of concrete slab for Gas Plant area —

1020 HM backfills ~~test~~ test pit —

1025 HM steps out to the ^{SW} ~~south~~, blue staining encountered at ~ 1' bgs
 to the SW boundary of the site, SW of the south test pit blue area

1045 HM steps out to the east, blue staining ~~observed~~ ^{observed} in 50 feet
 to the east, then it starts diminishing at ~ 350' ^{150'} bgs, clay observed w/
 note → at 1010 Eric Lee of Michigan was on-site —

1047 Eric Lee off-site —

1055 AM starts excavating test pit in ^{SW} with blue stained area
 no blue staining encountered —

note → Fluor Daniel set up a numbered grid system (by dimensions)
 with the origin at the NW corner of the site at Green St.
 and the railroad tracks —

1107 Fluor Daniel takes a sample of blue stained soil in between the original
 blue stained areas - location of sample in 300' x ~~100'~~ ^{100'} —
 City of Detroit on-site to ^{COH} locate water and storm lines —

3

12/7/98

Michigan H

505 - 9809-005

1120 Fluor Daniel takes a base sample in 3-7.5 bgs in area of
 300' x 100', just south of north most original blue-stained area —
 note → 1st test pit in south original blue-stained area was located
 at ~ 300' x 150' —

note → samples will be analyzed for BTEX, PNAs, phthalates, cyanide,
 PCBs, Pb, Chromel —

1130 HM excavates test pit in area 400' x 160' at south site boundary
 observed some blue-staining at ~ 1' bgs, ^{east} side no observed blue-staining —

1140 Fluor Daniel takes a sample from the base of the test pit in area
 400' x 160' at south property boundary, ~ 3.5' bgs, light brown sand and
 silt, damp —

some blue staining to the south along concrete footing —
 note → sensidyne readings took as tubes for cyanide at below detection
~~COH~~ over readings are 0.0 ppm —

1200 HM starts excavating in area 200' x 125', the approximate location
 of the gas holder, some staining, concrete encountered at ~
 2' bgs, HM chases the concrete to the north, encountered the
 edge at ~ 200' x 100', concrete appears ~ 2' thick, ^{COH} below the
 concrete is a dark gray to black clay becoming gray, mottled, damp
 Fluor Daniel takes a sample of the clay in 6' bgs —

1225 HM tries to find the east edge of the concrete start excavating
 in area 220' x 130', found the edge of the concrete, excavated
 down ~ 6-7' bgs, murky gray water was flowing into the hole
 some black floating substance, no significant odor, may have come
 from an underground structure, Fluor Daniel has HM backfill, do
 not want to deal with dewater and liquid waste, took some video

1300 HM starts excavating in area 210' x ^{135'} ~~130'~~ and excavated to the south
 to find the edge of the concrete foundation - encountered at
 200' x 170', Fluor Daniel takes a sample of the dark clay beneath
 the edge of the foundation —

note → test pit 1 - south original blue stained area with extensions to the S & E
 test pit 2 - along the SE boundary in area 400' x 160' —

test pit 3 - original north blue stained area with extension to the South
 test pit 4 - excavation over gas holder with extension north and south —

4
12/7/98

Michigan H

505-9809-005

1330 HM backfills extensions of TP-4 —
 samples so far → TP-1 base, TP-2 base, TP-2 source, TP-3 base
 TP-4 north base, TP-4 south base

1345 HM starts extending TP-4 to the ~~south~~^{cot} southwest, edge of foundation
 encountered at area 250' x 150', encountered black stained soils, clay on
 side of foundation, Fluor Daniel takes sample of tar stained soil and
 of the black clay below the tar stained soils

1415 Eric Lee of Michigan on-site —
 note → material on top of concrete foundation is gray, black, brown sand
 and cinder-like gravel (light, coal-like) ^{and slag} noticed some chunks of hard tar
 in the soil piles

1420 HM extends TP-4 to the NW, encountered NW edge at an area
 180' x 100', no tar stained soils,

^{cot} Fluor Daniel sets up dust monitors —

1430 Fluor Daniel takes a base sample of TP-4 northwest, gray silty clay

1440 HM backfills TP-4 —

1510 HM excavates TP-5 in area 500' x 100', dark slag and cinder
 and sand encountered tops 1' bgs, brown in sand to 2-2.5' bgs, then
 a light brown sand and silt, TP-5 excavated to ~ 5.5' bgs, Fluor
 Daniel took a bottom sample

1530 HM excavates TP-6, approx. location 450' x 125', dark slag, sand and
 cinder to ~ 1' bgs, then a dark clay with sand to 3' bgs, below that is
 intermittent brown, rust, black, sand, sandstone, silt, gray clay encounter
 at ~ 7' bgs, ^{cot} as evidence of tar staining, some staining, Fluor Daniel
 samples the base and the side ~ 3' bgs (south side)

1555 HM excavates TP-7 in area ~ 200' x 220', same lithology as TP-6
 blue staining ~ 2' bgs in the sand and silt, some black organic observed at

1605 Eric Lee of Michigan off-site —

Fluor Daniel samples ~ 3' down, side sample (south) of TP-7 and base
 sample is the gray clay ~~± 1' bgs~~ HM continued excavating, encountered
 gw leakage at ~ 9' bgs, there is a gray ~~silt~~^{cot} silt and clay layer with
 fractures from ~ 6-8.5' bgs, Fluor Daniel took a sample of the silt
 and clay layer at ~ 8' bgs, ^{a sheen was observed on} the water had a sheen. The seeping

5
12/7/98

Michigan H

505-9809-005

ground water, the seeping groundwater appeared to be in a coarse
 sand, stained black

1625 HM starts backfilling TP-7 —

1635 HM ceases activities - clean up, load —

1645 START Harvey off-site —

12/7/98

Harvey

CJ

12/8/98

Michigan H

505-9809-005

0733 START Harvey on-site - Fluor Daniel and HM on-site
wx: cold ~40°F, partly cloudy, light wind to the SW

0745 safety meeting - walking, trips and falls

0755 HM excavates TP-8 in location of tar/water separator (area 220' x 200')

0800 HM uses a concrete breaker, ^{cold} HM personnel gets safety intro.

note → I mentioned to Diane of Fluor Daniel - based on what we saw in TP-7 that we should go deeper at the SW edge of TP-4 and at TP-3, she said she would ^{cold} excavate deeper at TP-4 and ^{water} go further north of TP-7 to excavate to 9-10' bgs - if something is found then she will locator further north

0830 HM starts breaking concrete in the NW corner of the site over the iron purifying boxes, HM continues to excavate TP-8 - rubble, debris, cinder and sand to ~2.5' bgs, black stained sand, silt, cinder to ~4', water seeped into the hole, sheen observed, odor, concrete wall to the north and east

0845 HM continues TP-8 to the south

note → at 0835 Scott with Fluor Daniel on-site - set up our sampling rig TP-8 south extension - same lithology of TP-7, ^{cold} observed some water seepage at ~7' bgs, observed tar seepage ~3.5' bgs - one small seep hole ~1"φ - observed the concrete wall to ~6' bgs of the tar/water separator to the north

0910 Fluor Daniel samples the black stained soils below the concrete in TP-8 to the south ~8' bgs

0915 called office using Fluor Daniel's cell phone - check-in, Mike D. said I could use personal phone and expense calls for company time since mobile phones are out a stiff clay was encountered ~10-10.5' bgs, Fluor Daniel sampled the clay below the black saturated sand

0935 HM extends TP-8 to the west to find the tar/water separator wall to the west - found the NW corner of the tar/water wall to the west ~ also an 8"φ pipe running to the west ~2' bgs

1015 HM extends TP-8 in the area of the ^{NW} corner of the tar/water separator - found it on the west side of an 18"φ pipe located ~1' bgs ^{cold} cannot ^{cold} excavate the whole side of the wall due to the pipe

1055 call Cedric on ^{cold} personal cell phone - I need video camera for all this week - can give it up ^{cold} on Friday evening

1100 call Ralph Dollhopf at Tar Lake on personal cell phone & update on Michigan

12/8/98

TP-8 CSH

Michigan H

505-9809-005

H activities - working around tar/water separator all morning
1105 HM backfills TP-8, setup for TP-9

1135 HM excavates TP-9 over former gas holder located in SW corner of site debris, brick, concrete, cinder to ~2' bgs, black stained, 2-3' bgs = gray silt and clay, ~3' bgs ~~then~~^{cold} steel sheeting was encountered, seepage of water and tar, black stained soil above the sheeting, small diameter piping encountered above the steel, strong odor, HM reading ~1.0, but up to 10

1150 HM extends TP-9 to the west to find the edge - encountered a concrete wall in approximate area 20' x 250' at the edge of the gas holder - at ~3.5' bgs a footing was encountered - on the outside of the concrete wall → clay, brick, cinder, debris and sand to 1' bgs followed by a brown sand with cobbles to ~6' bgs ~~extant of~~^{cold} (extent of that extension of the test pit), note that the ~~clay is black~~ surface material 0.5'-1.0' bgs is black and ^{far} stained

1210 HM extended TP-9 to the south ~15' and verified the concrete wall and footing

1215 HM breaks concrete in the area of the former boiler room, in the SW side of the gas holder, wall and footing exposed - slag, cinder, bricks and sand to 1' bgs, dark brown sand with gravel to 5' bgs - at bottom of footing, light brown sand to ~7' bgs, then a gray sand and silt becoming more silty to 10', at ~10' a gray silty clay, some black staining noted at top of gray sand and silt layer, water seeping in slowly, no sheen observed

1225 Fluor Daniel samples the gray silty clay ~10' bgs (TP-9 SW base)

1255 HM extends TP-9 to find the south edge of the gas holder, verified footer location, excavated to ~7' bgs, same lithology as previous, footer at ~3' bgs was a little wider

1310 HM continues to extend the TP-9 to the east to expose SE side of gas holder, same lithology as before, less staining observed

1320 Fluor Daniel samples sidewall light brown sand at ~6' bgs and a base sample of the gray silty clay ~10' bgs

note → Fluor Daniel took sensidyne tool readings during excavation of TP-8 results were below detection for benzene and cyanide

1345 HM breaks concrete over former spray pond building

8
12/8/98

Michigan H

505-9809-005

Hm extends TP-9 to the NE to find E side of gas holder foundation
~~TP-9~~ Hm extends TP-9 to the NE

1425 Hm breaker concrete in the former location of the gas plant —
around the NE side of the gas holder — same lithology and foundation
observed, slight staining, slight odor of silt and sand layer above the
silty clay, Fluor Daniel takes a side sample ~ 6' bgs of the light brown
sand and a bare sample of the gray clay ~ 10' bgs

1506 Hm ~~extends~~^{coll} extends TP-9 to find the ~~now~~^{new} edge of the gas holder founda-
debris, bricks, concrete, sand, cinder, tar stained, odor to ~ 2.5' bgs, Hm
encounters the steel plate (area is 80' x 175'), Fluor Daniel takes
a sample of the black stained sand material above the steel plate
appears to be the inside of the gas holder foundation, continue searching
for the NE edge

1535 Hm encounters a concrete structure and a well of some sort on the
NE side of the gas holder foundation. ~~At~~^{the} the concrete ledge was
encountered ~ 5' bgs at the bottom of the gas holder footing
the top of the well structure was encountered at ~ 3' bgs just to
the east of the concrete structure - they are not connected at
the top of the concrete, water was observed in the well thing, when
~~soil~~^{soil was} dropped into the well, water seeped out from the soil into

the top of the concrete structure, concrete structure could be a vault
of some sort, no apparent sheen observed from the seeping water

1550 getting late, Fluor Daniel wants to explore this more but does not
want to leave this extension of TP-9 open, Hm backfills, Fluor
Daniel will explore further tomorrow, clean up, grease machines
1605 START Harvey off-site

12/8/98

John Harvey

12/9/98

Michigan H

505-9809-005

0740 START Harvey on-site - IT on-site, Hm on-site
wx: cold ~ 35°F, partly cloudy, light wind to E-SE

0745 daily safety meeting - watch for underground utilities, structures, show care
0750 Hm starts excavating over the unknown vault (like structure on the
NE side of the gas holder foundation (see 12/8/98 notes))

Hm breaker concrete in the NE corner of the site - over the approx. locations
of the meter room, compressor room and tar well
IT sets ~~up~~^{up} air sampling pumps in each corner of the triangle -
shaped site

0835 Hm backfills the ~~concrete~~^{over the} concrete in the NE edge of the gas holder
another ledge appears ~ 1-2' below the top and extends ~ 2' further
out and is also ~ 2' thick, so the bottom of the concrete extends
to ~ 6' bgs, noticed an 18" dia ~ 5' bgs running E-W, it
was broken at the top by the excavator - it is full of liquid
stained soils from ~ 4.5' - 9' bgs, strong odor, sheen observed on
seeping ground water, note - concrete was ~ 4' wide

0910 Hm removes the concrete breaker
Hm excavates the inside and outside of NE edge of gas holder
Note → while excavating earlier, w-1 was encountered ~ 3' bgs, Hm excavated
it out

0930 call office - check-in with Shirley

0935 IT takes a sample of the gray sand and silt ~ 6' bgs ~~on~~^{at} NE side
of gas holder - extension of TP-9, same lithology as before with
a coarse sand and gravel layer from ~ 8.5'-10.5' bgs, saturated,
gray-black, odor, followed by a gray clay - IT couldn't sample
the clay due to side fall-in of the test pit and ground water seepage

1005 Hm starts TP-10 in area of NE corner over iron purifying boxes
1010 call Ralph Dillhoff in Tar Lake - update on Michigan H activities, no
far product found to date except ~~within~~^{within} the foundations walls of the gas
holder, SW corner of site, injected soil and groundwater, no OSC file yet,
one final report after removal implementation, periodic patrols
lithology → concrete 0-1.5-2' bgs, brown fill sand to ~ 3' bgs, light brown
and rust sand and silt to ~ 6' bgs, a gray sand and silt to ~ 8' bgs

12/9/98

Michigan H

505-9809-005

followed by a gray coarse sand, saturated, no odor, clay was encountered in 9' bgs - IT took a base sample of the clay

1053 HM excavates TP-11 over the iron purifying boxes in area in 42' x 50' - same lithology as TP-10 - IT takes a bottom sample of the clay at ~ ~~10'~~^{10.5'} bgs (clay is at ~ 9' bgs), no odor, no obvious staining

1125 AM excavates TP-3 again to confirm ground water and clay - same lithology - with saturated sand and gravel from ~ 8'-10' bgs, clay was encountered at ~ 10' bgs, no odor, concrete ledge was encountered ~ 6' bgs near the south property edge - appears to be a footer

1150 HM excavates TP-12 in ~ area 320' x 50' - noticed a 2" ^{COH} steel pipe ~ 2.5' bgs running E-W - HM avoided it and did not puncture it. Same lithology as TP-11 - with top 1.5-2' made up of slag, cinder, brick and fill sand, no odor or sheen observed, IT takes a base sample of the clay

note → IT also took a base sample of the clay in TP-3

1222 HM excavates TP-13 in ~ area 150' x 50' over the old boiler room, same lithology as TP-11, gray sand and gravel, saturated is from ~ 8-10', stiff gray clay ~ 10' bgs, no odor or sheen observed, IT took a base sample of the clay - at my suggestion, IT took a sidewall sand sample at 5' bgs ^{COH} for confirmatory reasons since the test pit was open

1300 Wx: cool ~ 45°F, sunny, light to medium wind to the east

1315 go to lunch

1345 back from lunch

1350 HM excavates TP-14 in ~ area 120' x 40' over old boiler room

1410 HM opens a grate ~ 10' SW of TP-14, could be a tar well, it is 75" to the bottom of the structure, sludge and soil at the bottom, contains water and floating oil substance, surface of liquid is ~ 2' bgs

TP-14 → concrete, brick and debris to ~ 3' bgs, red ^{COH} stained concrete also a light colored sand intermixed below the concrete also red stained, dark brown sand to ~ 6' bgs, light brown silty sand to ~ 10.5' bgs, followed by the dark saturated sand and gravel, slight odor

1420 IT sampled the light brown silty sand at 10' bgs and the dark brown

12/9/98

Michigan H

505-9809-005

sand below the brick pipe in 6' bgs

1437 HM excavates TP-15 in ~ area 100' x 80' just to the SW of the former tar tank area - debris, brick, fill sand and cinders excavated out of TP-15 ~ 2.5' bgs water and tar seeped into TP-15, odor, sheen observed, black smears were left on sidewalls, note - there was concrete and brick layer ^{0.5-1'} ~~at~~ bgs which HM broke through

1500 Abad with Michigan on-site, talk with him about impacted soil and gw, tar and debris in gas holder, apparent tar pump and apparent tar tank

HM continues ^{COH} TP-15 to the east to expose that portion of the tar tank, exposed that end, there appears to be an inner wall to the tar tank, while ~~excavating~~ ^{COH} excavating, HM hit and broke a 12" ^{COH} cast iron pipe ~ 5' bgs, water seeped into the pit, appears to be water that is contained within the pipe, no odor, no black color, no sheen observed. IT is worried about possible water line - Dianne of IT is calling office and City of Detroit to determine what it is and if it is active

note → inside the tar tank there was debris, brick, cinder, dark brown fill, water was encountered ~ 2' bgs, odor, no sheen ^{COH} observed

1610 Abad with Michigan departs site

1630 IT will have HM put a concrete sleeve over the hole tomorrow morning, cease activities, IT leaves TP-15 open and HM covers most of the pit with the excavator

clean up

1645 START Harvey off-site

12/9/98

Chris Harvey

12/10/98

Michigan H

SO5-9809-005

0730 START Harvey on-site, IT on-site

WX: cold ~ 30°F, partly cloudy, very light wind to East

0755 HM on-site, warm up excavator, unload concrete

0800 daily safety meeting - do not rush and become careless to complete the job

0805 HM puts a concrete patch over the hole in the leaking pipe

0825 HM backfills TP-15 on the NE side of tar tank

0840 HM continues TP-15 on the SW side of tar tank in order to find the corner (\sim area $160' \times 100'$) \rightarrow encountered an 8" \varnothing ceramic/brick piping \sim 3' bgs containing a very viscous tar sludge \rightarrow A 10' section was broken during excavation, no seepage of tar - lithology \rightarrow debris, concrete, brick, fill sand to \sim 3' bgs, followed by brown sand and silt to \sim 5' bgs, a gray coarse sand and gravel was encountered to \sim 10' bgs becoming saturated \sim 8' bgs. Some black staining observed, slight odor, ground water seepage \sim 10' bgs. Sheen observed on ground water, some tar observedIT samples the brown sand and silt \sim 5' bgs and the gray sand and gravel \sim 7' bgs (did not locate tar tank corner because of tar pipe and various concrete)0940 HM excavates TP-16 $\overset{\text{in}}{\underset{\text{obstructed}}{\text{near}}}$ former spray pond building area - debris, brick, concrete, fill sand to \sim 3' bgs, followed by brown silt, sand and gravel to \sim 5' bgs, followed by gray sand and gravel to \sim 9' bgs - there was a coke layer underneath the concrete slab, ground water seepage \sim 8' bgs, odor, noticeable sheen and tar $\overset{\text{bgs}}{\text{seeping}}$ into TP-6 with the groundwater (\sim area $140' \times 150'$)
IT samples

1010 HM backfills TP-16

1025 HM excavates TP-17 to the south of the former spray pond building in \sim area $135' \times 170'$, extend TP-17 to the south due to pipe obstructions in 4' bgs1035 per my suggestion - IT moves the air sampling pipe from the NW end to the middle of the south property line to obtain a downwind sample
TP-17 \rightarrow debris, asphalt, gravel to \sim 1.5' bgs, brown fill sand to \sim 3.5' bgs, light brown sand and silt to \sim 5.5' bgs, gray silt and sand to \sim 8' bgs followed by gray sand and gravel saturated, strong odor, seeping ground water tar, sheen observed, clay found \sim 10.5' bgs, stiff, no dessication of clay
has called Dan Stybel - wanted to see if method 8260 was an OK method for

12/10/98

Michigan H

SO5-9809-005

BTEX analysis, better method, recommend by lab, 8260 is in work plan
I said I would mention it to Ralph, don't see a reason for a problem
Send a small letter notifying the change, notice for $\overset{\text{COH}}{\text{COH}}$ at surface
of ground water in portion of site1110 HM excavates TP-18 to the east of gas holder in SW corner of site
brick, debris, cinder, fill sand to \sim 2' bgs, dark brown sand, some clay to \sim 4' bgs
light brown silty sand to \sim 7' bgs with blue staining, 7'-8' bgs a rust colored sandstone, from 8'-11' bgs a gray sandy silt, some black staining, slight odor, followed by a 0.5' thick $\overset{\text{seam of}}{\text{gray}}$, saturated sand and gravel, slight odor, clay encountered \sim 11.5' bgs, ground water seepage \sim 11' bgs, slow seepage rate, no sheen observed (\sim area $140' \times 230'$)IT samples the gray and black silt \sim 9' bgs1145 HM extends TP-18 to the south in \sim area $140' \times 240'$ to a depth of \sim 7' bgs. same lithology, no blue stainingIT samples the light brown sand and silt \sim 7' bgs1215 HM excavates TP-19 under slab of former gas plant foundation east of gas holder - concrete and debris to \sim 2' bgs, followed by dark brown fill sand and clay to $\overset{\text{COH}}{\text{COH}}$ 3.5' bgs, a $\overset{\text{COH}}{\text{COH}}$ sandy silt to \sim 5' bgs, a gray saturated sand and gravel from 5-8' bgs (depth of feet pit), \sim 7' bgs ground water seepage occurred, strong odor, green colored water, observed some $\overset{\text{COH}}{\text{COH}}$ brown tar at surfacenote \rightarrow a 2' \varnothing by 3' long end pipe was excavated from TP-19, black coal tar was slowly seeping out of a hole, HM put it back in TP-19 while backfill1250 HM excavates TP-1 again to evaluate the ground water and clay, a gray $\overset{\text{COH}}{\text{COH}}$ sandy silt $\overset{\text{COH}}{\text{COH}}$ sand from \sim 5'-8', followed by a gray sand and gravel saturated, light odor, water seeps in at \sim 9' bgs, no sheen observedIT takes a sample of the gray sandy silt \sim 8' bgs1255 call Ralph in Tar Lake - update on Michigan H activities, found some tar seepage on surface of ground water, not a distinguishable layer, found extent to south and north, other test pits will further define extent to east and west, extent \sim 150' - 200' diameter1330 HM excavates TP-20 in the foundation adjacent to the old pipe shop. same lithology as TP-16, water and tar seeps in \sim 9' bgs, strong odor

12/10/98

Michcon H

505-9809-005

- saturated gray/black sand and gravel from 7.5' - 9' (depth of test pit)
 1410 HM excavates TP-21 ^{CDH} in old purifying house foundation in area
~~40' x 30'~~ - hit another concrete slab ~ 1.5' bgs - above slab contained debris
 concrete and brick, tar coated debris and fill sand, greenish/tanish stained
 debris and on slab
 1420 extend TP-21 to the south to avoid the concrete slab
 1425 Lary of Michcon on-site
 1435 TP-21 - concrete, slag, brick to ~ 2' bgs, from 2-4' bgs, dark brown fill
 sand and clay, from 4'-7' light brown silt and sand, from 7' the
 gray/black sand and gravel, ground water seeps in ~ 9' bgs, slight odor
 no sheen or tar observed
 IT samples the gray sand and gravel at 7.5' bgs
 1500 HM excavates TP-22 in area of former meter room, encounter a lot
 of debris, concrete slabs, wall and foundation, a possible manhole
 1530 Lary of Michcon off-site
 1540 Due to problems excavating TP-22 and a potential water line -
 IT has HM cease excavation activities due to lateness of day, do not
 want to poke and search this late - HM removes some trees to
 better position the excavator tomorrow for TP-22
 1550 Stop work, clean up
 1600 START Harvey off-site

12/10/98

Chris Hart

Note:
at houses

Michcon H

505-9809-005

12/11/98

- 0735 START Harvey on-site - IT and HM on site
 be of HM at the Police Station - there was a break-in last night - HM's
 trailer was broken into and equipment stolen
 wk: cold ~ 34°F, partly cloudy, light wind to the east
 0805 HM continues to excavate TP-22, hit a pipe and hear it, water
 seeps in from pipe (~ 4' bgs). Stop work on TP-22 - will patch
 the line and ^{CDH} too much concrete and pipe encountered
 0835 HM excavates TP-23 in area of west most farwell to search it out
 encounter piping, debris, brick, foundation, brick walls, one area excavated
 to ~ 4' bgs - some black staining, strong odor
 excavated to ~ 9' bgs in another part of TP-23 to the north, debris, sand
 brick to ~ 5' bgs, 5-7' bgs is a black-stained, tar saturated sand, silt, clay
 and gravel, strong odor, below the black-stained soil was gray sand and gravel
 with some silt, ground water seepage at ~ 9' bgs, no apparent sheen
 observed, when the black-stained soils dropped in hole, a sheen and
 black tar was observed on the surface of the ground water
 0925 IT samples the black-stained soils at ~ 6' bgs
 0950 HM excavates TP-24 in area north of TP-23 (area ~ 40')
 soil lithology is the same as TP-14, ground water seepage ~ 9' bgs, no
 sheen observed, slight odor
 IT samples the gray sand and gravel at 8' bgs
 1030 call Ralph Dollheist - update on Michcon H, break-in last night, found
 a pocket of tar saturated soil - it is defined to the north, south and east
~~west~~ and impractical to continue to the west due to all foundations
 and unknown piping encountered, IT will try to put a boring in
 to the west of TP-23 next week for extent, IT changed their method
 of analysis for BTEX from ⁸⁰²⁰ ~~8000~~ to 8260, Surveyor company never on-site
 1035 Eric Lee of Michcon on-site
 1105 Eric Lee off-site
 HM backfills TP-24
 1120 HM excavates TP-25 to the SE ~ 10' of the far well gate, same
 lithology as TP-14, strong odor, a sheen and brown tar was noted
 on the ground water surface, also the groundwater appeared to

16
12/11/98

Michcon H

505-9809-005

be a green color on the south side of the test pit, many different size pipes were encountered, one 2" ^{COH} steel ~~#~~ pipe located ~ 3' bgs leaked ~~#~~ a small amount of tar and liquid

1210 HM excavates TP-18 again to 3' bgs, IT takes a sample of the black organic and sand soil, leaves a dark green residue ^{COH} on sample glove

1235 HM puts a concrete patch over the hole in the ^{COH} pipe broken in TP-22, backfill

1255 HM starts taking out the trees, debris and tires located in the NW corner of the site

1445 HM ceases activities, clean up, decon excavator bucket

1500 depart site

12/11/98

Chris Harvey

12/14/98

Michcon H

505-9809-005

0800 START Harvey on-site - Michcon and IT on-site

wx: cold n 32°F, sunny, light wind to the S-SE
site walk, go over boring locations, IT will add an additional 2-3

0850 Eric Lee with Michcon off-site

0905 SAI on-site - drilling contractor, safety review, set up

0955 START Harvey leaves site to buy a camera

1010 START Harvey arrives back on-site

SAI has started drilling mw-9, in NE corner of site (area 470' x 20')

1015 call office - check-in with Mike Diekhans

MW-9 → 0-4.5' concrete; 4.5'-5.5' gray, wet, sandy silt, 5.5'-6.5' sand with some silt, black-stained no readings on HNU, @ 8' gray, ~~stiff~~^{COH} soft plastic

note - SAI is continuously sampling boring with 2' split spoon

5.144 clay was encountered, no odor, no readings on HNU, decreasing in silt content, @ 19', soft, plastic clay

1445 left a voicemail for Ralph Dollhopf - OSC

note - SAI ~~f~~ left site at 1430 to get some lunch

1500 SAI back on-site, set mw-9, 2" ^{COH} PVC screen and casing, set at 9.5'

1545 Eric Lee of Michcon on-site

1630 Eric Lee of Michcon off-site

SAI sets up to drill mw-4, SW corner of site, just south of gas holder

0-6' black clayey topsoil with brick, cinder and slag; some brown sand in the 3-6' shelly tube; ~~#~~ 6-8' brown silt, wet, some sand; 8'-10' brown-gray

note → mw-4 is continuously sampled via pushcore with 3" ^{COH} casing and 3' shelly tubes

sand, coarse, wet, black-stained and saturated at 8.5', ~~#~~ shear observed

no apparent odor; 10'-^{12'} gray, plastic clay, some silt, moist, stiffer than the clay encountered in mw-9

1750 SAI ceases drilling activities due to darkness - mw-4 @ 18', leave again

note → IT took samples of 5-7' and 28-30' in mw-9

IT took sample of 7-9' in mw-4

clean up, load

1800 leave site

Chris Harvey 12/14/98

17

18

12/15/98

Michcon H

505-9809-005

0750 START Harvey on-site → wx: cold ~32°F, sunny, light wind to East

0800 SA1 on-site

0810 Eric Lee of Michcon on-site - unlocked the gate

0825 Jim with IT on-site

SA1 is decommissioning equipment, unloading

0840 SA1 continues with the installation of MW-4 - 18'-30' gray, plastic moist clay, end of boring 30'

0910 Eric Lee with Michcon off-site

0925 IT samples the clay at 30' in MW-4

0940 ^{CDH} SA1 sets MW-4 at 10', 1" Ø PVC, 5-foot screen ^{then decor. ext.}1000 SA1 installs MW-10 with push bore method just south of fire/water separator
MW-10 - 0-3' black clayey fill material, brick, cinder; 3-6' dark brown, moist sand, clay, silt, 6'-8' brown, F sand, moist, some silt; rust colored sandstone in 3" thick at 8'; 8.5'-10' gray, F sand, saturated, some black staining, little silt, some gravel at 10'; 10'-15' gray, plastic, moist, clay note → JT samples the sand at 7.8' and the clay at 13-15' from MW-10

End of boring 15'

1040 SA1 ^{drills} ~~augers~~ with 6 3/4" Hollow stem augers to install a 2" Ø well

1050 SA1 sets MW-10 at 10', 2" Ø PVC, five-foot screen, decor

1130 SA1 installs MW-8 on north side of site (^{CDH} in area $\frac{30'}{20'} \times 25'$) by push bore

1135 call office - check-in with Mike Dieckhans

MW-8 → 0-2.5' black clayey topsoil, cinders; 2.5'-5' light brown sand and silt, moist; 5'-7' brown sand, little silt, moist; 7'-8' gray/black sand and gravel, wet; 8'-15' gray, plastic, clay, moist. End of boring 15'

1205 SA1 drills with 6 3/4" HSA to install a 2" Ø well

IT samples the sand at 6'-7' and the clay at 13-15' from MW-8

1215 SA1 sets MW-8 to 9', 2" Ø PVC, 5-foot screen

1245 SA1 and IT leave site for lunch

1315 SA1 and IT back on-site

SA1 decomposes equipment

1330 left a voicemail for Ralph Dollhoff - update on activities

1350 SA1 installs MW-6 in NW corner of site (^{CDH} in area 70' x 20')

MW-6 → 0'-6' brown sand, rubble, cobbles, debris, dry; 6'-8' brown,

Michcon H

505-9809-005

sand and gravel

12/15/98
little gravel and some silt; becoming gray ^{CDH} black stained at 8'

saturated; 9'-15' clay, gray, moist, stiff, becoming plastic

note → MW-6 installed via pushbore method, end of boring 15'

in MW-6 - hit some concrete ^{CDH} 5' ago

1435 SA1 sets MW-6 at 10', 1" Ø well, 5-foot screen

JT took sample from sand 6-8' and clay 13-15' from MW-6

1500 Eric Lee of Michcon on-site

1520 SA1 installs MW-5 along western property boundary (^{CDH} in area 10' x 20') via pushboreMW-5 - 0-8" concrete; 8"-3' ^{CDH} dark brown clayey topsoil, cobbles, cinder

3'-6' light brown sand, some silt, moist; 6'-8' brown/grey sand and gravel, some silt, moist; 8'-9.5' gray sand and gravel, wet, some silt;

9.5'-15' gray, moist, silty clay, somewhat stiff becoming plastic

End of boring at 15'

1545 SA1 sets MW-5 to 10', 1" Ø well PVC, 5-foot screen

JT samples the sand and sand and gravel 5-7' and silty clay 13-15' from MW-5

and from ~ 6"-1.5" for surface

1605 SA1 decomposes equipment

SA1 develops MW-10 with surge method with check valve - only ^{CDH}

extracted ~ 1 gallon in 20 min, stop on that well - black and

silty

1645 Eric Lee of Michcon off-site

1650 depart site

Chris Flory 12/15/98

12/16/98

Michigan H

SO5-9809-005

0800 START Harvey on-site; wx: cold ~32°F, sunny, very light wind to ENE

0825 SAI on site, unload, prep, site safety meeting

0855 SAI installs mw-3 just south of tar/water separator via geoprobe using 4' sampler tubes

MW-3 → 0-4' black clayey soil, cinder, debris, gravel, sand; 4-6' light brown F sand, moist, some silt; 6-8' gray sand and silt, black-staining wet, 3" silty clay lens at 6', rust colored harder sand at 8'; 8'-8.5' wet, sand silt, black stained; 8.5'-10' gray/black sand becoming more coarse at depth; 10'-12' gray, stiff silty clay, moist, becoming plastic saturated 8.5'-10' in gray/black sand; light sheen noted on saturated soil End of boring was to 12', attempted a boring to 12-15' - contained water similar to 8.5'-10', slight odor

0945 SAI set mw-3 to 8.5', fall in wouldn't allow deeper. 1" Ø PVC, 5-feet screen

IT sampled sand 6-7' and clay 10-12' from mw-3

Note → personnel from SAI is ~~con~~ developing the wells

1000 SAI decons equipment

1010 Eric Lee with Michigan on-site

1015 SAI installs mw-1 on southern property boundary (~ area 400' x ~~150'~~) with geoprobe

geoprobe → mw-1 - 0'-4' dark brown clayey topsoil, sand, gravel, ~~cinder~~, brick; 4'-7' gray coarse sand, moist to wet, ^{little} ~~some~~ gravel; 7'-8' gray sand

silt, some clay, moist, end of boring due to problems with sampler

1100 SAI sets MW-1 to 8.5' due to collapse, 1" Ø PVC, 5-feet screen

1115 SAI steps out and does discrete sampling adjacent to mw-1 at 8-10'

10-12' because of problems with the sampler and collapse ~~12-15'~~

12-15' → 8-10' - gray/black coarse sand, wet; 10'-12' gray, moist silt + clay, somewhat stiff; 13-15' gray, moist, silty clay, plastic

IT ~~sampler~~ took samples from sand 5-7' and clay 13-15' from mw-1 and the discrete sample borehole adjacent to mw-1

1210 SAI decons equipment

1140 called office - Check-in with Shirley and Mike Dickhans

1210 SAI decons equipment

1230 Eric Lee of Michigan off-site

IT and START Harvey off-site for 10 min. to get some food

12/16/98

Michigan H

SO5-9809-005

1305 SAI installs mw-2 just to the SE of the gas plant with geoprobe

wx: cold ~38°F, cloudy, light rain, little or no wind

left a voicemail for Ralph Dollhopf - update activities

MW-2 → 0'-3.5' black, dark brown clayey topsoil, sand, cinder, blue staining top foot; 3.5'-7' interbedded rust and light brown sand and silt moist; 7'-9' gray coarse sand, some gravel, saturated; 9'-15' gray moist silty clay plastic, end of boring 15'

1345 SAI ~~sampler~~ sets mw-2 to 10', 1" Ø PVC, 5-feet screen

IT ~~sampler~~ takes samples from the brown and rust sand 5-7' and the silty clay 13-15'

1410 Jim with JT says Monday will be bailing wells and slug tests and soil surface samples, Tuesday will be well sampling

1415 SAI installs mw-11 just south of gate ~ 15' east of fence with geoprobe → mw-11 - 0'-3.5' brown and black slag, clayey topsoil, cinder, brick, sand; 3.5'-7' brown sand and silt, moist; 7'-9' gray

black coarse sand, some fines, wet, strong odor, black, gooey, tar-like substance bottom 3" of sand; 9'-15' gray, moist silty clay, plastic

1500 SAI sets mw-11 at 9', 1" Ø PVC, 5-feet screen, EOF 15'

IT samples sand 5-7' and clay 13-15' from mw-11

1520 SAI decons equipment

Note → @ 1300 SAI started installing protective sticky covers

1545 SAI installs mw-7 in between the gas holder and spray pond building (~ area 150' x 150') with geoprobe

MW-7 → 0'-3.5' cinder, brown/black clay, brick, gravel, sand; 3.5'-7' brown medium sand, moist, some silt; 7'-9' black/gray sand and fine gravel, slight odor, coarser 7-8', also 7-8' an oily substance saturated the sand and gravel, sheen from this sampler tube ~~sampler~~ caused by rain was observed; 9'-15' gray, moist silty clay; EOF 15'

1625 SAI sets mw-7 to 10', 1" Ø PVC, 5-feet screen

IT samples sand 5-7' and clay 13-15' from mw-11

1635 SAI decons equipment

1640 SAI bores a hole in area of TP-20 ~~soil~~ so IT can obtain a sample of the observed green groundwater in that area

12/16/98

Michigan H

505-9809-005

water was a dark brown/black color, turbid with an iridescent sheen, ^{cold} SAI set a temporary well - IT will sample it next week when they can get more volume of water -

1705 Eric Lee of Michigan off-site -

SAI decons equipment -

1725 SAI installs a boring adjacent to mw-7 to obtain a Shelby tube of the clay for a tri-axial permeability test the boring failed - couldn't get an adequate sample -

1800 ~~Eric~~ Cease activities, clean, load -

SAI and IT will be on-site tomorrow to develop 3 remaining wells at 8:30 AM -

1810 START Haney leaves site -

12/16/98

Chris Haney

12/17/98

Michigan H

505-9809-005

0830 START Haney on-site; wx: sunny, cold ~30°F, light wind to E, icy - ^{cold}

0845 IT on-site -

0850 SAI on-site, develops ~~to~~ ^{cold} the remaining mw's -

IT moves drums, cleans up site debris -
6 drums left on site for disposal - 3 soil, 2 groundwater and
decon water, 1 empty one for bailed water next week -

1010 START Haney departs site -

12/17/98

Chris Haney

SOS-9809-005

842 OVERCAST SITE. NO SIGN OF PRP CONTRACTOR. WEATHER
FARKAS ^{out} & JIM OF FLUOR DANIEL ON SITE.

SOS-9809-005

0850 FLUOR DANIEL GTF OPENS ALL THE WELLS AND GAUGES THEM. TO TOP OF CASING.
MW1 10.45 ft MW5 10.08 ft MW6 9.68 ft
MW8 8.64 ft MW9 8.78 ft MW1 9.66 ft
MW2 10.88 ft MW7 9.48 ft MW10 10.79 ft
MW4 10.40 ft MW3 10.36ft W3 UNABLE TO OPEN.

1015 SETS UP PERISTALTIC PUMP. STARTS TO PUMP DOWN WELLS.
DON'T HAVE THE RIGHT TUBING. HE DECIDES TO COLLECT HIS SURFACE SOIL SAMPLES WHILE WAITING.
SOMEONE BACK AT HIS OFFICE TO COME BRING TUBING TO SITE.

1030 SAMPLES SOIL USING AN ENCORE SAMPLER. COLLECTED SURFACE
SAMPLES NEAR MW1; MW2; MW4; MW10; MW3; MW7; MW2;
MW1 & MW8.

1205 DAN OFF SITE. TO PUMP DOWN/PURGE THE MONITORING WELLS.

1235 DAN OFF SITE. PURGE WATER FROM MW7 HAS BLUE & GREEN SHEEN ON TOP.

1400 DECISION WAS MADE TO MEET ON SITE TOMORROW MORNING AT 0845
HOURS. STILL NEED TO PURGE AND SAMPLE WELLS. PROBABLY WILL NOT DO
SLUG/BAIL DOWN TEST UNTIL NEXT WEEK. START DEPARTS SITE.

Fluor
12/21/98
Mon 12/21/98

MICHCON H

12/22/98

SOS-9809-005

0845 STRET MILLER ARRIVES ON SITE. FLUOR DANIEL (IT) ALREADY
ON SITE. GETTING SET UP. JIM FARKAS & SCOTT FILIPIAK ONSITE
OF MICHCON ON SITE. FLUOR DANIEL TRIES TO PUMP
WELLS. THE TUBING KEEPS FREEZING UP.

0915 MICHCON DEPARTS SITE. FLUOR DANIELS STILL HAVING PROBLEMS WITH
TUBING FREEZING. THEY DECIDE TO BAIL THE ONE-INCH DIAMETER WELLS.
THE BAILER CAN'T RETRIEVE MUCH WATER. WATER TURNS TO ICE AS
SOON AS THE BAILER IS BROUGHT OUT OF THE WELL.

0950 FLUOR DANIEL DECIDES NOT TO SAMPLE WELLS TODAY DUE TO
THE EXTREME COLD. THEY DECIDE TO FINISH COLLECTING
SURFACE SOIL SAMPLES AND PERFORM BAIL DOWN TESTS ON
THE TWO-INCH DIAMETER WELLS. SCOTT FILIPIAK OFF SITE.

WEATHER: Mostly sunny; 0°F wind chill -20°F; winds at 10 to 15 mph out
of the west.

1030 ATWELL HICKS ON SITE TO SURVEY IN WELLS. THEY WILL START
WITH A BENCHMARK THAT IS OFF SITE AND WORK THEIR WAY BACK
TO THE SITE.

1105 Jim Farkas decides to NOT DO BAIL DOWN TEST. WATER LEVEL
INDICATOR KEEPS ICING UP AND MALFUNCTIONING. HE DECIDES
TO COLLECT SURFACE SOIL SAMPLES.

1115 COULD NOT COLLECT SURFACE SOIL SAMPLES. SOIL WAS FROZEN.
JIM FARKAS TRIED TO DIG IN THE SOIL WITH A SHOVEL. SOIL WAS TOO HARD

TO COLLECT A SAMPLE. DECIDED TO COLLECT A COMPOSITE SAMPLE OF THE

1215 DRUMMED SOIL CUTTINGS FOR WASTE CHARACTERIZATION.

SURVEYORS ARE FINISHING UP THEIR SURVEY OF THE WELLS AND PROPERTY
CORNERS. Jim Farkas off FLUOR DANIEL (IT) GIVES SOME INSTRUCTIONS
TO THE SURVEYORS AND DEPARTS SITE. START DEPARTS SITE.

Fluor
12/22/98
Mon 12/22/98

12-30-98

0800 Start Smith arrives on site. No sign of PRP contractors. Weather: Clear, 10°F, windchill -15°F. — winds 10 mph — nms

0823 (IT) DURDOR Daniel Arrives on site - Jim Farkus — nms
- Jim Farkus said he was going to try to take H₂O samples from the wells if they are not frozen & do a bail out test. — nms

0830 (IT) Jim Farkus getting set up to sample, — nms

0835 Jim Farkus opened MW4 - hose is frozen so he put it in truck to warm it up — nms

0842 Farkus starts the peristaltic pump to try to purge MW-4. — nms

0847 Farkus is having trouble with the hose freezing, he's trying to warm the hose up in his truck again. — nms

0852 Farkus tries to purge well again — nms

0855 Hose is still freezing so Farkus said that he will have to take the water samples on a warmer day. — nms

0856 - Farkus is putting away pump equipment & moving to MW-10 to attempt a bailer test & static H₂O level & slug test — nms

0903 Farkus is measuring static level — nms
10.72 feet static level MW-10

H₂O level: 9.10 start of bailer test. Farkus pulled out a bailer of H₂O

Time 0:	10.86 ft	3.5 min:	10.79	9.0 min:	10.76
30s:	10.85	4.0 min:	10.79	10.0 min:	10.75
1.0 min:	10.83	4.5 min:	10.78	15.0 min:	10.74
1.5 min:	10.88	5.0 min:	10.76	20.0 min:	10.74
2.0 min:	10.82	6.0 min:	10.77	25.0 min:	10.72
2.5 min:	10.81	7.0 min:	10.77	30.0 min:	10.72
3.0 min:	10.80	8.0 min:	10.76		

— Guaged to top of casing — nms
N. Smith 12-30-98

0950 MW-8 ^{nms} 8.52 feet static H₂O level
Farkus pulled 1 bailer of H₂O & Guaged the H₂O level — nms

Time 0:	8.65 FT	3.5 min:	8.55 FT
0.5 min:	8.62	4.0 min:	8.55
1.0 min:	8.60	4.5 min:	8.60
1.5 min:	8.59	5.0 min:	8.54
2.0 min:	8.59	10.0 min:	8.53
2.5 min:	8.58	15.0 min:	8.53
3.0 min:	8.57	20.0 min:	8.52
		25.0 min:	8.52

Guaged to top of casing

1025 Farkus measures static H₂O level of MW-9 at — can't get measurement - may be dry — he's got a bailer to see what is in the well — There's H₂O in the well - need to let it settle before he can guage it again — nms

1035 - Farkus is still having trouble with guage — put it in his truck to warm up for a little bit — nms

1043 - Guage is still not working. Farkus is taking the guages tip apart in an attempt to get it working again. — nms

1050 Measures static H₂O level at MW-9 = 8.73 feet
Farkus pulls 1 bailer of H₂O

Time 0:	9.02 FT.	4.0 min:	8.92 FT
0.5 min:	9.02	4.5 min:	8.90
1.0 min:	9.01	5.0 min:	8.90
1.5 min:	8.99	10.0 min:	8.83
2.0 min:	8.96	15.0 min:	8.78
2.5 min:	8.95	20.0 min:	8.75
3.0 min:	8.94	25.0 min:	8.74
3.5 min:	8.93	30.0 min:	8.73
		35.0 min:	8.73

N. Smith 12-30-98

1136 START Smith & Fluor Daniels Farkus leave
Site N. Smith

115/99

Michigan H

505-9809-005

0820 ^{contd} START Harvey on-site, IT on-site
wx: cold 7°F, cloudy, snowy

0830 IT start sampling mw-2

0915 call office to check-in - Mike Dieckhans on phone

well	DTW
------	-----

MW-2	11.08'
------	--------

MW-3	10.49'
------	--------

GP-1	9.65'
------	-------

MW-1	9.91'
------	-------

MW-9	8.95'
------	-------

MW-7	9.61'
------	-------

MW-4	10.52'
------	--------

well	DTW
------	-----

MW-11	10.58'
-------	--------

MW-10	10.92'
-------	--------

0940 IT sets up to sample mw-3

IT is sampling wells ^{contd} in a portable ice shanty with a propane heater to try to sample in the cold conditions

1040 1020 called office - check-in with Mike Dieckhans, I will be here all day

1040 IT sets up to sample GP-1, little water production observed a slight sheen on small amount of water extracted, ^{temporary well} ^{well integrity jeopardized} seemed to TOC

1110 call Ralph Dollhopf in Tar Lake - at Michigan - sample wells with ice shanty, will also be here Monday; did not give extension to IT

1130 IT sets up to sample mw-1, the other TT well samples MW-9 with a 2" dia bailed

1230 IT sets up to sample mw-7
note → a 1" dia bailed was found in GP-1, the bottom couple of inches was stained a greenish color

1340 IT sets up to sample for mw-4
IT is sampling for BTX, PAH, phthalates, dissolved Pb, Cd, Cr, Ni, cyanide (WAD + total), PCBs in mw-1, mw-2, mw-3, mw-4 and (rbt in mw-2 and mw-3)

GP-1 sampled for BTX due to small amount of liquid

1330 Clayton Analytical labs on site to pick up samples
note → IT field filtered samples for metals

N. Smith
12-30-98.

1/15/99 Michcon H

505-9809 - 005

1400 IT sets up to sample MW-11
the peristaltic pump blew while collecting a moist blank, ceased
collection of 1" Ø well samples, MW-11 was not sampled

1440 IT starts sampling MW-10, 2" Ø well

1500 IT ~~finishes~~^{stops} work and cleans up

1505 START Harvey off-site

1/15/99

Chris Harvey

1/18/99

Michcon H

505-9809 - 005

0905 START Harvey on site, IT on-site

WX: cloudy, cold ~36°F, wet, light wind to NE

IT is set up to sample at MW-6

IT is cutting part of stickup for old well W-3 in order to
obtain a sample, W-3 is dry

0955 IT sets up at MW-5 to sample

well	DTW	well	DTW
MW-6	9.72	MW-2	11.03
MW-5	10.14	MW-1	9.65
W-3	dry	MW-9	8.75
MW-11	10.51	G-P-1	9.73
MW-4	10.47	MW-8	8.73
MW-10	10.84	MW-7	9.57
MW-3	10.44		

IT takes a composite sample of soil cuttings contained in
55-gallon drums

1015 IT takes static water ~~DTW~~ readings on all the wells

1035 IT sets up to sample MW-11

note → at 1025, IT ~~took~~^{int'l} collected surface sample HA-3

1110 IT collected a surface sample HA-2

1115 IT sets up to sample MW-8

1125 IT collects a surface sample HA-1

note → IT extracted 25 pore volumes from each well for
development prior to sampling, no observed shears or product
in wells

1250 START Harvey departs site

Chris Harvey

2/16/99 Mich Con H 505-9809-005

0845 START Gibson on site, David Bice of IT, Steve Mathis of HM Environmental, on site. (CH)

0900 Dan Strybel of IT on site. HM loads trucks w/ debris and 3-55 gallon drums. HM has 2 trucks (1 - 15 yd dump truck and 1 - 20 yard roll off and truck).

0905 Roll off and dump trucks leave site for disposal @ Woodland Meadows in Belleville, MI. (CH)

*Note HM has a 3 man crew including operator/foreman and 2 truck drivers. Backhoe on site.

0915 Bice and Strybel does a site walk through. Bice anticipates the drivers will return to site in 1 $\frac{1}{2}$ hours. (CH)

1035 HM dump truck returns to site. HM loads dump truck al tires and debris. (CH)

1050 HM loads 3 drums containing non-haz water on pickup for T+D. (CH)

1052 HM dump truck (15yd) leaves site w/ debris (tires, bricks, trees)

1058 Roll off returns to site. HM loads 20 yd roll off

1125 Roll off box loaded and leaves site for landfill.

1130 START Gibson leaves site. Bice will update START of activities during his absence from site.

1515 START Gibson returns to site. Steve Mathis on site.

Mathis of HM states the a total of 6 loads of debris left site. 105 cubic yards. The 7th load is in the 20 yd roll off box left on site because vehicle broke down. Sent off site for repair. HM and IT will be on site tomorrow @ 0800 hours to complete debris removal. (CH)

1520 START leaves the site. (CH)

Cedric N. Gibson
2/16/99

2/17/99 Mich Con H 505-9809-005

0845 START Gibson on site. IT and HM on site. (CH)
* Weather: cloudy and humid, wind 10 mph SW temp ~34°F. HM loading 15 yd dump truck w/ debris. (CH)

0830 HM transporter leaves in dump truck for landfill.

Woodland Meadows in Belleville, MI. The 20 yard roll off from yesterday was already gone to the land fill for disposal! David Bice of IT and Steve Mathis of HM on site. (CH)

0845 HM cuts some of the larger trees w/ power saw (chain) Waiting for return of trucks.

- START meets w/ Bice of IT. Bice states that another load should get the rest of debris. The general scraping of property will take place. Bice feels all should be complete around noon. (CH)

1020 15yd dump truck returns to site. HM loads truck.

1035 HM dump truck leaves the site, but is held up by train on Green St. adjacent to site. (CH)

1055 Train has gone. Dump truck leaves for landfill.

Michigan Pumping Services (^{NPSS}) onsite to bring 20 yard roll off. NPSS subcontracted by HM to transport debris. HM loads roll off.

1130 Loading roll off complete. Bice of IT wants HM to scrape northwest corner of site more to remove ^{more} debris. Bice feels that one more load will do it.

* START observed a sump 4'x4', at least 4' of water w/ approximately 1" of oil (black) on surface. Sump is at least 8 feet deep. Hard to tell depth due to sediment at bottom. Bice of IT did not know what to do about sump and was not aware that it was there.

- Other area where building was demolished, floor was broken and appeared to possibly have hidden sump/drain areas. START photodocuments sump area (CH)

- Sump not covered. Pipe sticking out of it. (CH)

Cedric N. Gibson 2/17/99

2/17/99 Mich Con H 505-9809-005

1140 10 yard roll off leaves site (CJ)

1150 START Gibson calls C. Harvey @ Toledo Tie
to give update. No answer.

1155 START Gibson calls OSC Dohlfeld & Tar Lake to give update

No answer. Line busy. (CJ)

1200 START Gibson calls E&E office to check in. Speaks w/
S. Garlej. Garlej stated C. Harvey faxed corrections
for Toledo Tie Polrep. She will do corrections, except
air results table. (CJ)

1205 Gibson calls Harvey @ Toledo Tie. Harvey update on
activities @ Mich Con H. 10 loads so far, 5 each of
20 yard roll off and 15 yard dump trucks. Harvey stated
that sump had a grate covering it. Grate had been
removed. Open sump poses a definite safety hazard
if a vandal or trespasser enters site. (CJ)

1215 START lunch break. No lunch (CJ)

1225 START returns to site. Dump truck on site being
loaded. Last load. Bice of IT off site (CJ)

1300 Dump truck leaves site. Total of 5 loads today and 6
loads yesterday. START lunch. HM onsite. (CJ)

1330 START returns to site. Per HM no other debris will be
removed from site. HM waiting for return of truck to
demolish backhoe. Bice have not returned. Per HM, he
had to go to another site. (CJ)

1335 START Gibson leaves site (CJ)

Cedric A. Gibson

2/17/99

2-28-99 Monday

1000 STANT Smith arrived on site. Dan Strickel of IT
& Eric Lee of Mich Con on site was

1037 JT MARK Sieman on site. (CJ) was

W/ I bled to Area TP-23 - IT said going to sample surface
soils. Area TP-23 is the gas production area. (CJ) was

3 Aliquots from surface stock pile. (CJ) was

Air monitoring will take place at the excavation areas
Walked to area TP-9. (CJ) UNK

1100 ERIC Lee leaves site (CJ) was

IT continues walking site & finding excavation
locations. (CJ) was

IT Measuring out & staking excavation location TP-9
& pointing out where the gas lines lay. (CJ) was

1121 STANT & IT leave site. (CJ) was

N. Smith

6/29/99

Michigan H

505-9809-005

0825 START Haney arrives on site - weather \rightarrow cool 70°F
humid, cloudy, high wind to the SE

- Mark Sienan + Suzanne of IT on site, HM Environmental Services on site, excavator is not yet on site —
take a site walk with Mark - go over locations —

0830 IT collects static water levels from the mws's —
per Mark of IT - 3 air monitors will be setup prior
to sampling + excavating - 1 in NE corner between school
and site, 1 upwind and 1 downwind \rightarrow volatiles + particulates

0840 Mark of IT marks the locations of sampling —

0910 the excavator is mobilized on site —

0915 daily safety meeting —

0930 setup and start test trench over TP-17 —

IT sets up air monitoring stations —

HM first excavates a trench to ~ 7' bgs to see the
soil profile - H₂O encountered at 7' bgs, observe shear
and stained soils —

IT separates soil 0-3' surface soil - collect sample

3-9' ~~soil~~ HM mixed on a ledge to let water drain
from the soil \rightarrow will sample later —

0-1' backfill, debris, brick, black sand —

1-2' cinder, no odor —

2-5' brown F-M sand, moist —

5-8' gray F-M sand, some black staining, odor —

8-9' gravel, black in appearance, staining, no odor, observe

~~some~~ free product shear —

HM + IT set up and excavate material over the hole

in the ~~the~~ south corner of the site (~ area TP-9)

brick, debris, cinder, black-stained soils, observe small
amount of free product 0-3', at 3' a steel sheet
is encountered, odor —

HM mixes up material, IT collects a waste characterization
sample, IT does not take a surface sample here because

6/29/99

Michigan H

505-9809-005

the material ~~to 3'~~ is visually impacted and is limited
to 3' depth —

1220 HM backfills the test pit —

1230 IT and HM setup and excavate 3rd Waste characterization
test pit between TP-19 and TP-4 —

HM encounters the floor of the gas holder and some
pipes 3-4' bgs —

HM excavates in location of TP-19, stained soils at
4' bgs, debris, brick, cinder in surface ;

IT will take a surface sample of the soil excavated
between TP-19 and TP-4 —

HM mixes the full soil column in TP-19 to take a
waste characterization sample - let sit to drain water —

1330 IT sets up particulate air monitors —

1400 IT samples the test pit from location of TP-17 for waste
characterization - composite from 3'-9' bgs —

HM backfills test pit in location of TP-17 —

1430 Depart site for lunch —

1500 Back on site —

HM excavates test pit in area of TP-23 —

HM mixes whole soils column (0-10') for representative
sample —

IT samples the surface soil between locations of
TP-19 and TP-4 —

1550 IT collects a composite sample from location of TP-23 —

1600 IT has HM excavate a surface test pit in location of TP-25
to collect a representative waste characterization sample from

that portion of the site —

while excavating - excavated inside the tar/water separator
observe tar on & stained soil and debris —

1625 IT collects surface soil waste characterization sample from
location TP-25 —

1650 IT collects composite of test pit in location of TP-19 —

6/29/99

Michigan H

SOS-9809-005

the trailer is on site to sample the excavator —
Haw backfills excavation —

Haw deems the excavator bucket - decon water flows into
the excavation area —

IT cleans up, marks excavation locations, samples
1705 START Hawkey departs site —

6/29/99
JH

44
59

Michigan H

SOS-9809-005

Photo Log - cont. ^{cont} Roll #3

Frame	Dir.	Date	Taken By	Description
24	-	12/16	CDH	7'-8' section of sampler tube 4-8' from MW-7 showing oily saturated soils and sheen runoff
23	-	12/16	CDH	(one of the pictures 23-27) 0-4' sampler tube from MW-2 show blue/green soil staining
22	NE	12/21	MH	COLLECTED ENCORE SAMPLE
21	W	12/21	MH	PURGING WELL WITH PERISTALTIC PUMP (MW-11)
20	N	12/30	NMS	TESTING STATIC H ₂ O LEVEL OF MW-8
19	N	1/15/00	CDH	IT sampling MW-4 in ice shanty
18	E	2/16/00	CDH	HM removing debris from site
17	S	2/16	CDH	HM load water drum onto pickup for transport and disposal
16	SW	2/16	CDH	HM loading roll off box
15	NE	2/16	CDH	" " "
14	W	2/17	CDH	Debris that will be removed from site
13	NE	2/17	CDH	Scrap not covered located in northwest corner of site
12	E	2/17	CDH	After debris removal
10	N	2/17	CDH	" " "
9	W	6/29	CDH	waste characterization test pit (in area of TP-17)
8	N	6/29	CDH	" " " " " "
7	N	6/29	CDH	" " " in area of TP-9, gas holder
6	W	6/29	CDH	" " " " in area of TP-19
5	NE	6/29	CDH	" " " in location of TP-23
4	E	6/29	CDH	IT sampling surface soil of test pit between TP-19+TP-4
3	E	6/29	CDH	HM mixing soil within test pit in location of TP-23
2	N	6/29	CDH	tar in the tar/water separator
1	NE	6/29	CDH	waste characterization test pit in location of TP-25 for material

Michigan H

SOS-9809-005

Photo Log - cont. ^{cont} Roll #2

Frame	Dir.	Date	Taken By	Description
27	NE	12/9	CDH	TP-13
26	N	12/9	CDH	top area of TP-14 showing red stained concrete
25	NE	12/9	CDH	TP-14 showing broken 3"Ø pipe ~2' bgs with tar inside
24	E	12/9	CDH	open grate - apparent tar well
23	N	12/9	CDH	inside of ^{NW} corner of tar tank - TP-15
22	S	12/9	CDH	the NE corner of tar tank, showing broken pipe and ^{water} leaked
21	S	12/9	CDH	the E side of tar tank showing inside divider wall
20	SW	12/10	CDH	concrete patch on leaking 12"Ø pipe
19	N	12/10	CDH	TP-15 to the SW of tar tank
18	S	12/10	CDH	bottom of TP-16 showing tar seeping in or top of ground water
17	E	12/10	CDH	TP-16
16	SE	12/10	CDH	TP-17
15	W	12/10	CDH	TP-18
14	S	12/10	CDH	TP-19 showing green ground water
13	E	12/10	CDH	TP-1
12	W	12/10	CDH	TP-20
11	SW	12/10	CDH	TP-21
10	N	12/11	CDH	TP-23
9	NW	12/11	CDH	TP-25
8	S	12/11	CDH	soil taken from a 3' bgs from re-excavation of TP-18
7	N	12/11	CDH	HM removing debris and trees from NW corner of site
6	E	12/14	CDH	SAI setting MW-9
5	NW	12/14	CDH	SAI installing MW-4 via pushbore method
4	W	12/15	CDH	SAI setting MW-4
3	-	12/15	CDH	black stained sand above the clay from 9-12' shelby tube out of MW-10
				Missed a couple pictures or accidentally triggered camera
				New Roll #3
27	W	12/16	CDH	SAI installing MW-3 with geotube
26	-	12/16	CDH	soil taken from 4'-8' from shelby tube of MW-3
25	-	12/16	CDH	tar-like substance saturated sand above the clay in sampler tube 8'-10' from MW-11

Photo Log

Frame#	Dir	Date	taken by	Description
27	E	12/7	CDH	test pit in location of south blue stained area
26	W	12/7	CDH	scraps at SW ^{to} property boundary showing blue staining
25	W	12/7	CDH	Floyd Daniel sampling the blue-stained soils
24	W	12/7	CDH	test pit at 300' x 100' showing seam of blue staining, and strata of soil to ~ 3.5' bgs
23	SW	12/7	CDH	test pit in area 400' x 160' at south property boundary
22	S	12/7	CDH	concrete foundation encountered for gas holder
21				
20	N	12/7	CDH	south edge of the concrete foundation of the gas holder
19	E	12/7	CDH	tar stained soils at edge of gas holder foundation - SW edge
18	SE	12/7	CDH	NW edge of gas holder foundation
17	NE	12/7	CDH	TP-5 in area 500' x 100', NE site boundary
16	SW	12/7	CDH	TP-6
15	SW	12/7	CDH	TP-7
14	SW	12/7	CDH	TP-7 showing seeping ground water with a sheen
13	W	12/8	CDH	TP-8 showing water seeping in at ~ 4' bgs
12	SE	12/8	CDH	south side of TP-8 showing seeping tar
11	NW	12/8	CDH	TP-8 to the north - showing concrete wall of tar/water separator
10	E	12/8	CDH	SW corner of tar/water separator in TP-8 west extension
9	NW	12/8	CDH	Hm breaking concrete
8	SW	12/8	CDH	NW corner of tar/water separator
7	NE	12/8	CDH	SW side of gas holder foundation
6	SW	12/8	CDH	S side of gas holder foundation
5	SW	12/8	CDH	SE side of gas holder foundation
4	NW	12/8	CDH	NE side of gas holder foundation, showing concrete ^{structure} and well
3	NE	12/9	CDH	TP-10
2	SE	12/9	CDH	TP-11
1	NE	12/9	CDH	TP-3 excavated again to confirm clay and water
extra	E	12/9	CDH	TP-12 showing sidewall and 2" 4" pipe (left side of picture)

Favor Daniel has

Management of Manufactured Gas Plant Sites

Amherst Scientific Publishers ISBN # 1-884940-09-9

Edited by Thomas Hayes
David Lenz
David Neckles
Alfred Leuschner

May 24, 1998 - phase IV rules
of Federal Register

6016 - 5

ecology and environment, inc.

Recycled Paper/569129